

REMARKS

Claims 1, 3-6, and 12 remain pending after entry of this amendment. Claims 2 and 7-11 were cancelled herein. Claims 1, 3-6, and 12 were amended herein. Favorable reconsideration is respectfully requested in light of the amendments and remarks submitted herein.

Claims 7-11 are rejected under 35 U.S.C. § 112, first and second paragraph. Although Applicant does not necessarily agree with this rejection, claims 7-11 have been cancelled. Applicant respectfully requests that this rejection be withdrawn.

Claims 7-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bagley et al. (U.S. 4,329,526). Although Applicant does not necessarily agree with this rejection, claims 7-11 have been cancelled. Applicant respectfully requests that this rejection be withdrawn.

Claims 1-6 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hartmann et al. (U.S. 4,060,584) in view of Hsu (U.S. 4,994,255) and Miyata et al. (U.S. 5,707,919). Although this rejection has not been raised with respect to the newly amended claims, it will be addressed to the extent that it may be applied.

The Examiner asserts that Hartmann discloses a process for recovering gaseous chlorine and solid ferric oxide from chlorinator dust. The Examiner further asserts that because the carbon content is not oxidized, the process conditions of Hartmann would inherently be the same as that of the claimed invention. The Examiner relies on Hsu and Miyata to teach that the reaction can be carried out in a fluidized bed.

In order to establish *prima facie* obviousness, three basic criteria must be met, namely: (1) there must be some suggestion or motivation to combine the references or modify the reference teaching; (2) there must be a reasonable expectation of success; and (3) the reference or references when combined must teach or suggest each claim element. Applicant submits that the Office Action failed to state a *prima facie* case of obviousness, and therefore the burden has not properly shifted to Applicant to present evidence of nonobviousness.

Applicant asserts that the Examiner cannot establish a *prima facie* case of obviousness with respect to the newly amended claims at least because the references do not teach or suggest all of the claim elements. Hartmann states that their process is conducted as a multi stage process (claims and column 2, lines 53-60). In a first stage, the ferrous chloride is converted to ferric chloride vapor and iron oxide, and the ferric chloride vapor is separated from the iron

oxide. After that, only the vapor phase is subjected to the second stage of the process in which additional oxygen is used to form particulate ferric oxide and gaseous chlorine.

Applicant's amended claims recite that the conversion takes place in a single stage. As explained on page 8 of the specification, any other metallic chlorides that may be present in the starting material would stay with the solids in the pre-oxidizer, and would not have been subjected to any treatment stages in which they are converted into metal oxides and chlorine. Therefore, Hartmann does not disclose a process of "treating said chlorination waste with oxygen in a single stage."

The process of Hartmann also does not disclose controlling each of the following factors either alone or in combination, as claim 12 does: superficial velocity of the fluidising gas; proportion of oxygen in the gas feed to the fluidised bed; oxygen to chlorinator waste feed ratio; and temperature within the fluidised bed. Although the temperature within the first stage of the process of Hartmann is controlled to be within 500° C to 800° C, the other three factors that the claims recite are controlled are not described or indicated as being controlled in Hartmann. The process of the invention can include continual monitoring of the input feed material and the relative amounts of the various metal chlorides therein, and the four categories can be continually adjusted to account for the changes in the input feed material. As is evident from Figure 4 as well as other portions of the specification, changes in the relative amounts of the metal chlorides in the feed will change the conditions under which the process should be operated. The factors recited in claim 12 are not disclosed by Hartmann, and Applicant's process that includes adjustment to take into account changes in feed material is not suggested thereby. Therefore, all of the elements of claim 12 are not taught or suggested by Hartmann.

The secondary references, Hsu and Miyata do not remedy the shortcomings of Hartmann in that they also do not disclose or suggest all of the recited elements of the independent claims.

Applicant also asserts that the Examiner cannot establish a *prima facie* case of obviousness because there would be no motivation to modify the teaching of Hartmann to make it a single stage process. Hartmann requires the addition of more oxygen and different temperatures in the second stage. Therefore, if the process of Hartmann were modified to result in Applicant's process, it would become unworkable, and therefore there is no motivation to modify it. MPEP 2143.01.

With respect to a motivation to combine the teachings of Hartmann with that of Hsu and Miyata, Applicant respectfully asserts that one of skill in the art would not have been motivated to make this combination. The second stage of the process of Hartmann includes no particulates. Therefore, it would not be appropriate to use a fluidized bed in this situation, because fluidized beds are generally only used when particulates are present.

Applicant further asserts that a *prima facie* case of obviousness cannot be established because there would not be a reasonable expectation of success in modifying the teaching of Hartman because modifying Hartmann in the way necessary to result in the claimed invention would render it unusable for its intended purpose and therefore one of skill in the art would not think that the process would work. Furthermore, there would not be a reasonable expectation of success because the fluidized beds of Hsu and Miyata are generally not used where no particulates are present, as in Hartmann, and therefore, one of skill in the art would not think that the combination would function as intended.

Applicant respectfully asserts that the Examiner cannot establish a *prima facie* case of obviousness with respect to newly amended claims 1-6 and 12, and therefore requests that this rejection be withdrawn.

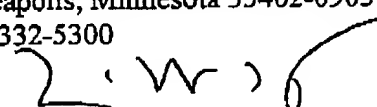
Conclusion

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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